

IN THE CLAIMS:

Please cancel claims 14 and 20 without prejudice.

Claims 1-13, 15-19 and 21-23 are pending in the application.

1. (Currently Amended) A method of responding to an anomalous change in downhole pressure in a bore hole comprising:

detecting the anomalous change in downhole pressure with a sensor in one of a plurality of nodes at a first location along a segmented electromagnetic transmission path integrated into ~~the~~ a tool string comprising a plurality of inductively coupled wired pipes;

sending a signal along the segmented electromagnetic transmission path;

receiving the signal by at least one receiver in another of the plurality of nodes in communication with the segmented electromagnetic transmission path; and

performing an automated response at a second location along the ~~drill string~~ electromagnetic transmission path.

2. (Original) The method of claim 1 wherein the anomalous change in downhole pressure is selected from the group consisting of a pressure kick, a blowout, and loss of circulation.

3. (Currently Amended) The method of claim 1 wherein the anomalous change in downhole pressure is detected by at least one pressure sensor associated with ~~nodes~~, integrated tools, non-integrated tools, or bottom-hole assemblies.

4. (Original) The method of claim 3 wherein the at least one downhole pressure sensor is located near the bottom of the downhole tool string.

5. (Original) The method of claim 1 wherein the at least one receiver is selected from the group consisting of a blowout preventor, a drilling fluid flow regulator, a computer, a router, a node, an actuator, and an alarm.

6. (Original) The method of claim 1 wherein the automated response is selected from the group consisting of actuating a blowout preventor, adjusting the flow of drilling fluid, and broadcasting an alarm.

7. (Original) The method of claim 1 wherein the automated response is performed immediately upon receiving the signal.

8. (Original) The method of claim 1 wherein the automated response is performed by the receiver.

9. (Currently Amended) The method of claim 1 wherein the method further comprises the step of automatically actuating an action performing device by the receiver.

10. (Original) The method of claim 9 wherein the automated response is performed by the action performing device.

11. (Original) The method of claim 9 wherein the action performing device is selected from the group consisting of a blowout preventor, a drilling fluid pump, and an alarm.

12. (Original) The method of claim 9 wherein the action performing device is located on the downhole tool string, in a well bore, or mounted on a drilling rig.

13. (Currently Amended) An apparatus for responding to an anomalous change in downhole pressure in a tool string for drilling a bore hole, comprising:

a segmented electromagnetic transmission path integrated into the tool string comprising a plurality of inductively coupled wired pipes;

the segmented electromagnetic transmission path adapted to communicate with one or more receivers in one or more of a plurality of nodes spaced along the tool string;

at least one downhole pressure sensor in another of the plurality of nodes in communication with the segmented electromagnetic transmission path;

the receiver being in communication with the sensor via the electromagnetic transmission path, wherein

~~the~~ an anomalous change in a downhole pressure is detected at a first location along the tool string and an automated response is actuated at a second location along the ~~drill~~ tool string.

14. (Canceled)

15. (Original) The apparatus of claim 13 wherein the anomalous change in downhole pressure is selected from the group consisting of a pressure kick, a blowout, and loss of circulation.

16. (Original) The apparatus of claim 13 wherein the at least one receiver is selected from the group consisting of a blowout preventor, a drilling fluid flow regulator, a computer, a router, a node, an actuator, and an alarm.

17. (Original) The apparatus of claim 13 further comprising at least one action performing device selected from the group consisting of a blowout preventor, a drilling fluid flow regulator, and an alarm.

18. (Original) The apparatus of claim 17 wherein the at least one receiver is adapted to actuate the action performing device.

19. (Original) The apparatus of claim 17 wherein the action performing device is located on the downhole tool string, in a well bore, near a well bore, or mounted on a drilling rig.

20. (Canceled)

21. (Original) The apparatus of claim 13 wherein the at least one pressure sensor is located near the bottom of the downhole tool string.

22. (Original) The apparatus of claim 13 wherein the automated response is selected from the group consisting of actuating a blowout preventor, adjusting the flow of drilling fluid, and broadcasting an alarm.

23. (Original) The apparatus of claim 22 wherein the blowout preventor is selected from the group consisting of a ram-type blowout preventor, an annular blowout preventor, a coiled tubing blowout preventor, and a spherical blowout preventor.